

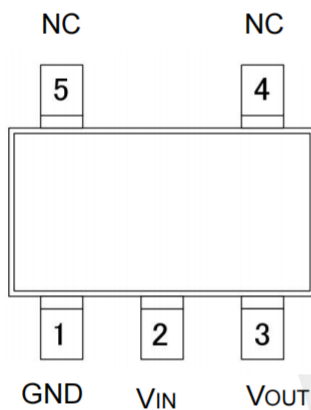
Features

- 1.5 μ A Current at no Load
- $\pm 3\%$ Output Accuracy
- 150mA Output Current
- Input Voltage up to 30V
- Current Limit Protection

Applications

- Industrial Controls
- Home Automation
- Automotive Electronics
- Modules (Wireless, Camera, etc.)
- Portable, Battery Powered Equipment

PIN CONFIGURATION



Pin Number	Pin Name	Pin Function
SOT23-5		
1	GND	Ground
2	VIN	Input of Supply Voltage
3	VOUT	Output of the Regulator
4	NC	No Internal Connection
5	NC	No Internal Connection

Ordering Information

HT7533-2-TP

OUTPUT VOLTAGE

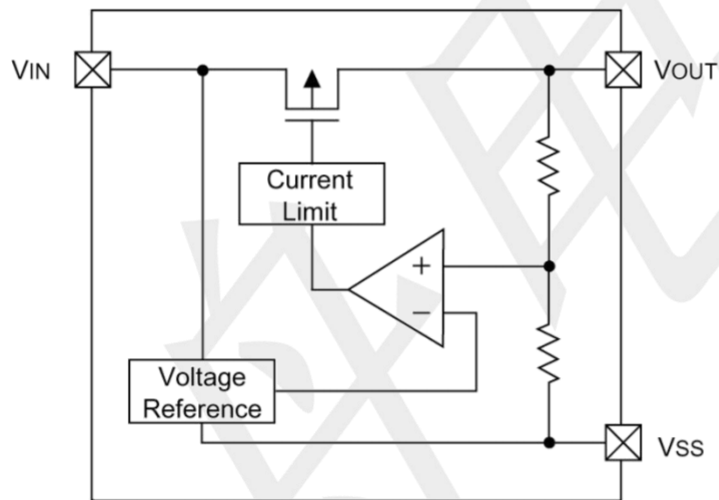
25 : 2.5V
30 : 3.0V
33 : 3.3V
36 : 3.6V
40 : 4.0V
50 : 5.0V

Absolute Maximum Ratings

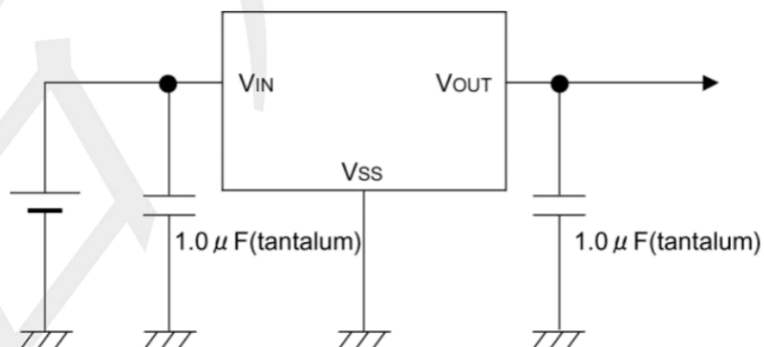
over operating free-air temperature range (unless otherwise noted)

		MIN	MAX	UNIT
VIN	Continuous input voltage range	-0.3	33	V
VOUT	Output voltage range	-0.3	33	
EN	EN pin voltage range	-0.3	33	
IOUT	Output pin current	Internally limited		mA
Temperature	Operating Temperature Range ,Topr	-40	+85	°C
	Storage, Tstg	-40	+125	

BLOCK DIAGRAM



Typical Application Circuit



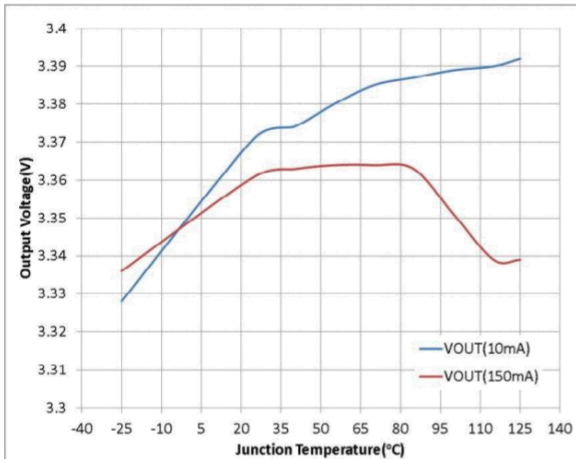
Electrical Characteristics

($T_A=25^{\circ}\text{C}$, unless otherwise specified)

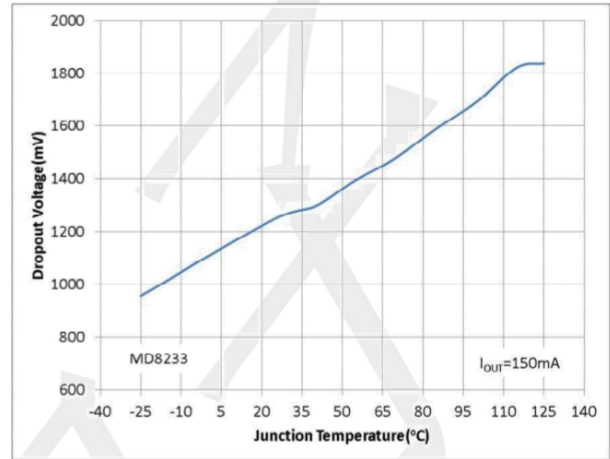
PARAMETER	SYMBOL	TEST Conditions	MIN	TYP	MAX	UNIT
Supply Voltage	VIN		3.0	--	30	V
Output current	IOUT		150	--	--	mA
DC Output Voltage Accuracy		IOUT = 10mA	-3	--	3	%
Dropout Voltage (VIN-VOUT)	IOUT = 150mA	VOUT = 2.5V	--	1250	--	mV
		VOUT = 3.0V	--	1200	--	
		VOUT = 3.3V	--	1150	--	
		VOUT = 3.6V	--	1100	--	
		VOUT = 4.0V	--	1050	--	
		VOUT = 5.0V	--	1000	--	
Ground Current (IOUT = 0mA)	IQ	VOUT = 2.5V	--	1.5	2.8	uA
Line Regulation	ΔLINE	IOUT = 1mA, $2\leq V_{IN}\leq 6V$	--	0.3	--	%
Load Regulation	ΔLOAD	$10\text{mA}\leq I_{OUT}\leq 100\text{mA}$	--	0.3	--	
Output Current Limit	ILIM	VOUT=0.9× VOUT(NOM)	200	--	--	mA
Power Supply Rejection Ratio	PSRR	VOUT = 3.3V, IOUT = 40mA, VIN = 5.5V, f = 1kHz	--	70	--	dB
Package Thermal Resistance θ_{JA} (Note 1)	Thermal Resistance Junction-to-Ambient		--	210	--	$^{\circ}\text{C/W}$
Total Power Dissipation $T_C=25^{\circ}\text{C}$	P _{DTOT}		--	0.25	--	W
Thermal Shutdown Temperature	TSD	IOUT = 10mA	--	160	--	$^{\circ}\text{C}$
Thermal Shutdown Hysteresis	ΔT_{SD}		--	15	--	

Note: Test condition: For SOT23-5, the device is mounted on FR-4 substrate PC board, with minimum recommended pad layout.

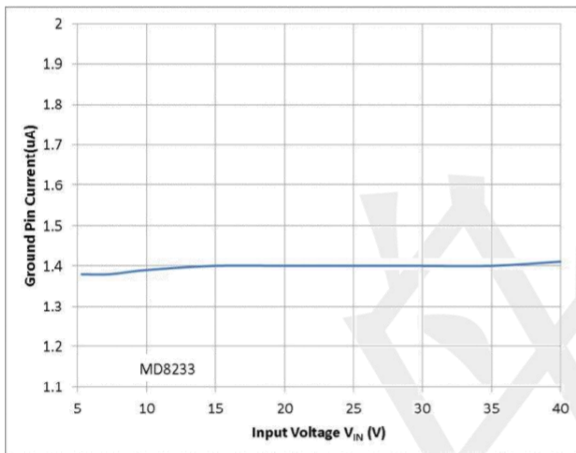
Typical Operating Characteristics (25 °C, unless otherwise noted)



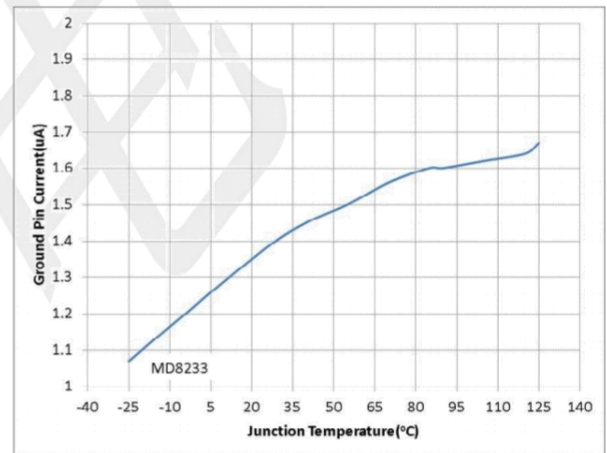
V_{OUT} vs Temperature



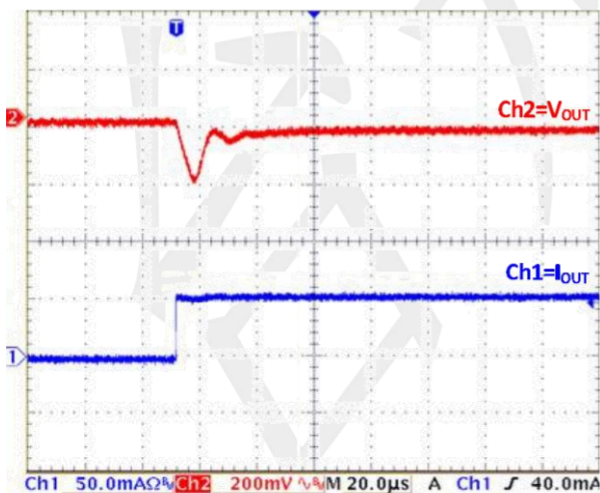
V_{DROP} vs Temperature



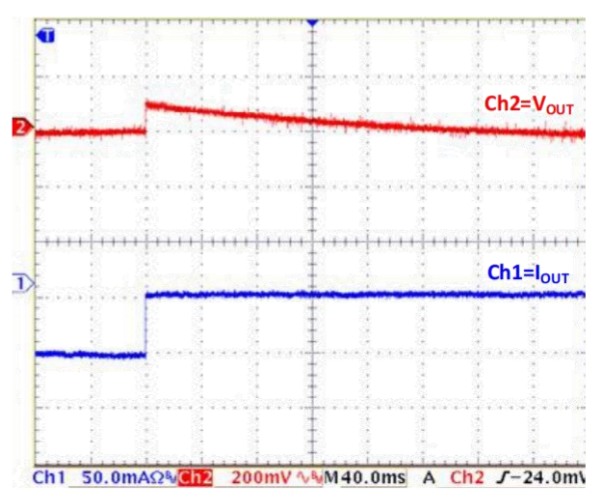
GND Current vs Input Voltage



GND Current vs Temperature



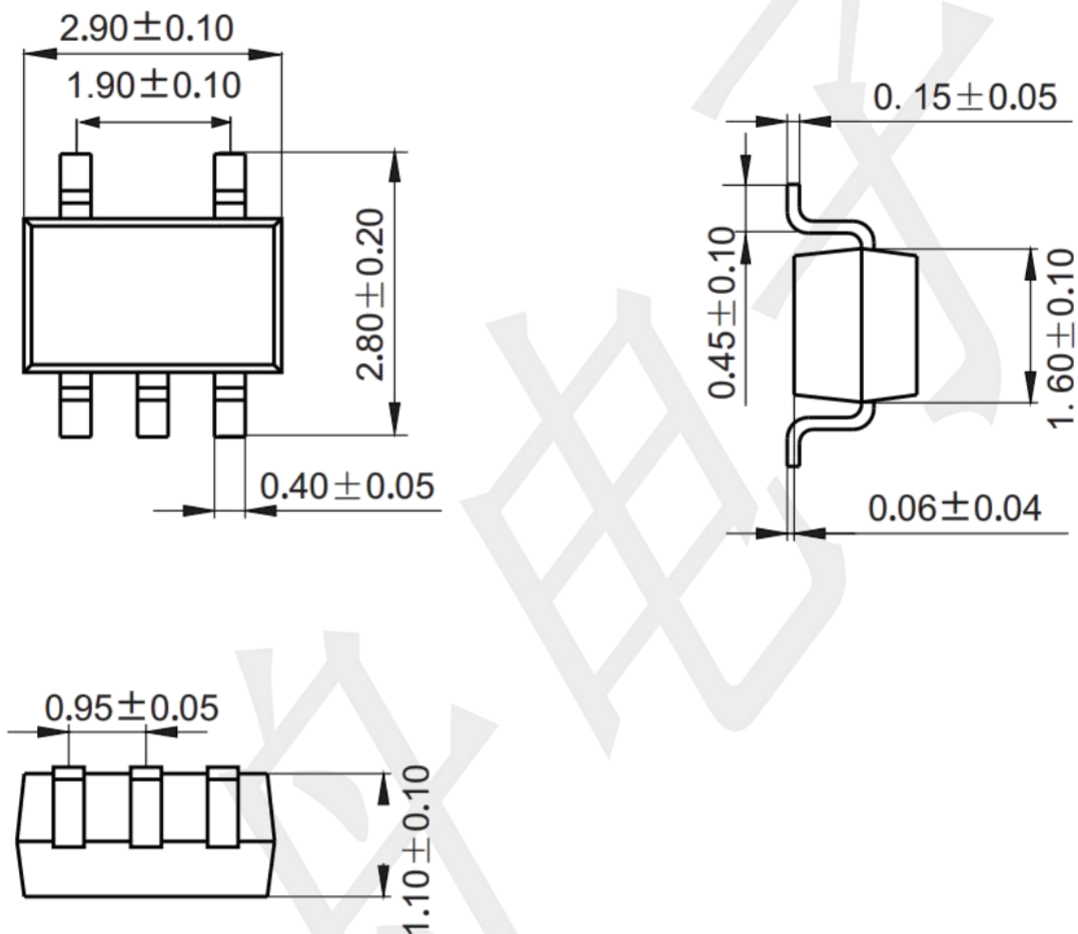
Load Transient:



Load Transient:

Package Outline Dimensions (unit: mm)

SOT23-5



Mounting Pad Layout (unit: mm)

